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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street

San Francisco, CA 94105-3901

JUN 18 1997

Charles R. Bazan
Forest Supervisor
Tonto National Forest
2324 E. McDowell Rd
Phoenix, Arizona 85006

Denise P. Meredith
State Director
Bureau of Land Management
Phoenix Field District
2015 W. Deer Valley Rd.
Phoenix, Arizona 85027

Dear Mr. Bazan and Ms. Meredith:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Cyprus Miami Leach Facility Expansion Project, Gila County, Arizona. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementation Regulations at 40 CFR 1500-1508, Clean Air Act Section 309, EPA's oversight of the conformity analysis under Section 176(c) of the Clean Air Act as administered by the Arizona Department of Environmental Quality, EPA's oversight of the Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit as delegated pursuant Clean Water Act Section 402 to the Arizona Department of Environmental Quality, and EPA's oversight of the Corps of Engineer's Clean Water Act Section 404 permitting process pursuant to the EPA's 404(b)(1) Guidelines.

Cyprus Miami Mining Corporation proposes to expand its existing mine in order to support continued copper recovery operations. The proposed action would approve three new leach facilities and a new waste rock disposal area on both private and public lands. The proposed expansion would disturb 770 acres of public lands and would extend the life of the mine for about 16 to 20 years.

EPA has three primary concerns with the proposed action: 1) a Clean Air Act conformity analysis appears to be needed as the preferred alternative would generate an increase of over 100 tons per year of a criteria pollutant; 2) ground water monitoring below the leach facilities should be specified, and financial assurance for the contingency of collecting and managing mine leachates should be developed as part of the bonding obligation; and 3) the proposed action should be modified in order to become the least environmentally damaging practicable alternative to meet the 404(b)(1) Guidelines.

Enclosures:

- 1) EPA's detailed comments--6 pages.
- 2) EPA June 10, 1997 comments on PN No. 954-0192-MB--2 pages.
- 3) Summary of Rating Definitions and Follow-Up Action.

cc: **Elaine Suriano, EPA, Washington, D.C.**
Cliff Rader, EPA, Washington, D.C.
Arizona Department of Environmental Quality, Phoenix
Marjorie Blaine, Corps of Engineers, Phoenix

**Detailed Comments by EPA on the
Draft Environmental Impact Statement (DEIS)
for the Cyprus Miami Leach Facility Expansion Project, Miami, Arizona**

Water Quality

Compliance with 404(b)(1) Guidelines

EPA has reviewed the Public Notice (PN) issued by the Corps of Engineers for compliance with the Federal Guidelines promulgated under Section 404(b)(1) of the Clean Water Act. Our comments on the PN are enclosed. The applicant proposes to fill a total of 9.22 acres of waters of the U.S., including drainages (3.94 acres), man-made surface impoundments (5.22 acres) and wetlands (.06 acres). Cypress would construct three new heap leach pads at the Oxhide, BL, and GMC sites, and an overburden deposit area at the Barney site. Diversion channels would be constructed around all of these facilities to avoid impacts to downstream portions of waters of the U.S.

We currently object to the issuance of this permit because we do not believe the proposed project is the least environmentally damaging practicable alternative, we believe the riparian habitat mitigation ratio is inadequate, and we do not have enough detailed information on the mitigation plan.

Under the 404(b)(1) Guidelines at 40 CFR 230.10(a), the applicant must demonstrate that the chosen alternative is the least environmentally damaging practicable alternative (LEDPA) to meet the project purpose. Under the Guidelines, a practicable alternative is one that is available and capable of being done given the constraints of cost, logistics and technology. It is important to note that simply because a less-damaging alternative is more costly or less convenient than the preferred alternative does not necessarily mean that it is impracticable.

The DEIS outlines under Alternative A - Modified Development Sequence a scheme that reverses the order of construction of the Oxhide and GMC leach facilities. This operational alternative would delay Oxhide site development (and the impacts to its resources) by seven years, or perhaps even avoid these impacts altogether and thereby not disturb sensitive wetlands and fishery resources at the Oxhide site. At a minimum, this delay could provide time for future improvements to solution control technology which could reduce impacts to resources at Oxhide. Under the best case scenario, the delay could allow for the substitution of a less damaging heap leaching site at the former Webster Lake drainage area, after a corrective action plan is carried out at this contaminated site. This would eliminate the need for any facility at Oxhide. EPA believes that Alternative A, not the proposed alternative in the PN and DEIS, is the LEDPA, and should be carried out in order to comply with the Guidelines.

financial assurance needed to construct and operate such a contingency plan. We recommend the following steps be completed in order to evaluate the feasibility of the proposed water quality environmental controls:

- 1) Establish the CWA performance standards and points of compliance.
- 2) Determine leachate source loadings by quantifying flow and concentrations of constituents of concern for various climatic conditions including at a minimum, seasonal variations, wet year flow, and dry year flow.
- 3) Define the effectiveness of each means of leachate control and compare this to the CWA performance standards.
- 4) Evaluate the feasibility of maintaining standards compliance, such as the capture efficiency of the proposed leachate control.
- 5) Develop contingencies to ensure system performance.
- 6) Provide financial assurance for implementing feasible controls to maintain compliance with standards; including facility maintenance, infrastructure costs, replacement, and contingencies.

Section 2.4.2.1. The section for the leach pad site preparation indicates there will be underdrains in all major drainages. These drains would also be used for leak collection. We are concerned that this collection system would only be located in that portion of the leach pad built over an old drainage. The document does not provide information on the spacing of the collection lines. If the collector lines are to be utilized for leak collection, coverage must be adequate. The applicant does not propose to place any low permeability material on the bedrock or "firm native soil" which underlies the collection drain. This creates a potential pathway for leach fluid to bypass the leak collection system and move down gradient towards the site boundary. EPA recommends that where the underdrains are to be placed on fill, that the top of the fill be covered with low permeability material. The applicant should propose some monitoring wells down gradient of the facilities to detect any bypass of the system.

Section 2.4.2.3. The design of the leach solution collection reservoir calls for a double liner in the primary operating portion of the pond. These liners, however, are only separated by a geonet which would make it easier for both liners to be breached at the same time. It also might make it difficult to collect leaks. We suggest a drainage layer be placed between the two liners, such as six inches of gravel, which would reduce the potential for the liners being breached at the same time. This drainage layer will be useful for the collection and capture of any leachate that should be present.

leaching has been underway for some time. The pile could reach complete or near saturation within the central portion of the pile. This could result in much higher head conditions than two feet. The head assumption should be based on the conditions that are predicted for the total height of the pile, not only a single ore lift of 15 feet. What head exists for the other operating leach pad facilities at the same location? We recommend that the model should be used to estimate a range of conditions such as those under a completely saturated pile condition.

- b. The modeled travel time for chloride at the BL facility is estimated at 38 years. How does this compare with the actual experience in and around the sites over the last 20 years? Travel times from the Oxhide and Bluebird facilities for ground water contaminants would seem to be much shorter.

Section 4.2.3.2.2. This Section indicates that the waste rock in the Barney pile will be Gila conglomerate. We suggest the FEIS provide for an estimate of the tonnages of various rock types. A geologic section of the pits showing the waste rock would be helpful.

Air Quality

Section 4.2.1.2 Page. 4-17, Conformity Determination. There appears to be a problem in the determination of conformity for PM_{10} and possibly SO_2 . Table 3-5a on page 3-10 shows that the most recent controlled fugitive PM_{10} emissions in 1995 were 2004.91 tons. Table 4.2 shows that the "No Action" conformity analysis is based on the projected maximum emissions for "No Action," which occurs in 2000 (i.e., 3,777 tons/yr). The third paragraph on page 4-70 states that "the maximum PM_{10} emissions in 2007 (3636.9 tons/year) would be 140 tons per year less than the maximum emissions year of the No Action Alternative, based on 70 percent control efficiency." In contrast, 40 CFR 93.153 (g)(2) states that "The Federal agency must provide documentation that the total of direct and indirect emission from such future actions would be below the emission rates for a conformity determination that are established in paragraph (b) of this section, based, for example, on similar actions taken over recent years." Therefore, Alternative A (preferred option) emissions should be compared to the most recent emissions (average of 1995 and 1996, if 1996 data are available). From Table 3-5a using 1995 data, the net increase in PM_{10} emissions by implementing the preferred option is $3636.9 - 2004.91 = 1,631.99$ tons/yr, which will require a conformity analysis for PM_{10} . For SO_2 , the requirement of a conformity analysis is uncertain since a comprehensive SO_2 emissions inventory is not presented in Chapter 3 (Affected Environment). The FEIS should address conformity for both PM_{10} and SO_2 .

Section 4.1.1.1.1 Page. 4-4, second paragraph. "A conservative level of 70 percent control of PM_{10} emissions is assumed by use of water and dust suppressants" We recommend that the percent control not be assumed, but be calculated using EPA particle emission percent control efficiency calculations as found in EPA-450/3-88-008, "Control of Open Fugitive Dust Sources."



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street

San Francisco, CA 94105-3901

JUN 10 1997

Colonel Robert L. Davis
U.S. Army Corps of Engineers
ATTENTION: Regulatory Branch (954-0192-MB)
5205 E. Comanche Street
Davis Monthan AFB, Arizona 85707

Re: Public Notice (PN) No. 954-0192-MB, May 11, 1997, Cyprus Miami Mining Corporation, Cyprus Miami Copper Mine Expansion, Miami, Gila County, Arizona

Dear Colonel Davis:

The Environmental Protection Agency (EPA) has reviewed the above PN for compliance with the Federal Guidelines promulgated under Section 404(b)(1) of the Clean Water Act (referred to below as the "Guidelines"). We also have reviewed the supporting information in the Draft Environmental Impact Statement (DEIS). The applicant, Cyprus Miami Mining Corporation (CMMC) proposes to fill a total of 9.22 acres of waters of the U.S., including drainages (3.94 acres), man-made surface impoundments (5.22 acres) and wetlands (.06 acres). CMMC would construct three new heap leach pads at the Oxhide, BL, and GMC sites, and an overburden deposit area at the Barney site. Diversion channels would be constructed around all of these facilities to avoid impacts to downstream portions the waters of the U.S.

We currently object to the issuance of this permit because we do not believe the proposed project is the least environmentally damaging practicable alternative, we believe the riparian habitat mitigation ratio is inadequate, and we do not have enough detailed information on the mitigation plan.

L Alternatives [40 Code of Federal Regulations Section 230.10(a)]

Under the Guidelines, CMMC must demonstrate that the chosen alternative is the least environmentally damaging practicable alternative (LEDPA) to meet the project purpose. Under the Guidelines, a practicable alternative is one that is available and capable of being done given the constraints of cost, logistics and technology. It is important to note that simply because a less-damaging alternative is more costly or less convenient than the preferred alternative does not necessarily mean that it is impracticable.

The DEIS outlines under "Alternative A - Modified Development Sequence" a scheme that reverses the order of construction of the Oxhide and GMC leach facilities. This operational alternative would delay Oxhide site development (and impacts to its resources) by seven years, or perhaps even avoid altogether disturbing sensitive wetlands and fishery resources at the Oxhide

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Thank you for the opportunity to comment on this PN. If CMMC agrees to Alternative A as the proposed project, increases the riparian mitigation ratio, and provides the information we have requested on the mitigation plan, we will reexamine our objection to this project. Please contact Harriet Hill at (415) 744-1969 or me at (415) 744-1905 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel A. Meer". The signature is fluid and cursive, with the first name "Daniel" being more legible than the last name "Meer".

Daniel A. Meer, Chief
Clean Water Act Compliance Office

cc: USFWS
ADEQ
AG&FD
Applicant